

Please **AMEND** the claims as follows:

1. (Currently Amended) A network device which supports Mobile IP protocol and is configured to send an accounting request, the accounting request identifying a mobile node supporting the Mobile IP protocol, the network device comprising:

a memory; and

a processor coupled to the memory, wherein the network device is adapted for updating a counter associated with the mobile node's activity during a Mobile IP session, the network device adapted for sending the accounting request to a AAA server supporting a AAA protocol in response to a trigger event, the accounting request both identifying the mobile node and including the counter, wherein the accounting request indicates a request to update accounting information associated with the mobile node using the counter, the trigger event being one of a lapse of a predetermined period of time, initiation or termination of a registration of the mobile node, ~~or~~ and when a number of packets are received or sent by the mobile node, the server being adapted for recording accounting information associated with the mobile node using the counter, the network device being a Home Agent supporting the mobile node or a Foreign Agent to which the mobile node has roamed, wherein the server maintains accounting information for a plurality of mobile nodes supported by a plurality of Home Agents, the accounting information being received from a plurality of network devices, each of the plurality of network devices being a Home Agent or a Foreign Agent supporting the Mobile IP protocol and the AAA protocol and being adapted for sending an accounting request to the AAA server in the AAA protocol to update accounting information associated with a mobile node in response to a ~~the trigger event, the trigger event being a lapse of a~~

~~predetermined period of time, initiation or termination of a registration of one of the plurality of mobile nodes, or when a number of packets are received or sent by one of the plurality of mobile nodes, wherein the server is not a Home Agent or a Foreign Agent.~~

2. (Previously Amended) The network device as recited in claim 1, wherein the counter indicates at least one of a number of packets received by the mobile node, a number of packets sent from the mobile node, a total service time for the mobile node, a number of bytes that have been sent to the mobile node and a number of bytes that have been sent from the mobile node.

3. (Currently Amended) A server in communication with a plurality of network devices supporting Mobile IP protocol and configured to receive an accounting request from the plurality of network devices, each of the plurality of network devices being a Home Agent or a Foreign Agent supporting the Mobile IP protocol, the accounting request identifying a mobile node, the server comprising:

a memory; and

a processor coupled to the memory, wherein the server is a AAA server supporting a AAA protocol, and wherein the server is adapted for storing accounting information for a plurality of mobile nodes supported by the plurality of network devices and logging accounting information associated with the mobile node in response to the accounting request received from one of the plurality of network devices in the AAA protocol supported by the AAA server, the network device being a Home Agent or a Foreign Agent supporting the Mobile IP protocol and the AAA protocol, the accounting request including at least one counter associated with the accounting information, the plurality of mobile nodes being supported by a plurality of Home Agents, wherein the accounting request indicates a request

to update the accounting information associated with the mobile node using the at least one counter, the at least one counter indicating at least one of a number of packets that have been sent to the mobile node, a number of packets that have been sent from the mobile node, a total service time for the mobile node, a number of bytes that have been sent to the mobile node and a number of bytes that have been sent from the mobile node, ~~wherein the server is not a Home Agent or a Foreign Agent.~~

4. (Original) The server as recited in claim 3, wherein the server is adapted for sending an accounting reply to the network device in response to the accounting request, the accounting reply acknowledging logging of the accounting information pertaining to the mobile node.

5. (Cancelled)

6. (Cancelled)

7. (Original) The server as recited in claim 3, wherein the counter indicates a number of registrations that have been accepted.

8. (Cancelled)

9. (Cancelled)

10. (Cancelled)

11. (Cancelled)

12. (Original) The server as recited in claim 3, wherein the server is a TACACS+ or a RADIUS server.

13. (Currently Amended) In a network device which supports Mobile IP protocol, a method of updating accounting information for a mobile node operating according to the Mobile IP protocol ~~Protocol~~ during a Mobile IP session, comprising:

composing a request packet for the mobile node in response to a trigger event, the trigger event being one of a lapse of a predetermined period of time, initiation or termination of a registration of the mobile node, ~~or~~ and when a number of packets are received or sent by the mobile node, the request packet identifying the mobile node and including at least one counter associated with accounting information pertaining to the mobile node, wherein the request packet indicates a request to update accounting information associated with the mobile node using the at least one counter, wherein the request packet is composed in accordance with a AAA protocol; and

sending the request packet to a AAA server supporting the AAA protocol, wherein the AAA server is adapted for performing accounting for the identified mobile node using the at least one counter in response to the request packet, the at least one counter indicating at least one of a number of packets that have been sent to the mobile node, a number of packets that have been sent from the mobile node, a total service time for the mobile node, a number of bytes that have been sent to the mobile node and a number of bytes that have been sent from the mobile node, the network device being a Home Agent supporting the mobile node or a Foreign Agent to which the mobile node has roamed, ~~wherein the server is not a Home Agent or a Foreign Agent~~, wherein the server maintains accounting information for a plurality of mobile nodes supported by a plurality of Home Agents, the accounting information being received from a plurality of network devices, each of the plurality of network devices being a Home Agent or a Foreign Agent supporting the Mobile IP protocol and the AAA protocol.

14. (Previously Amended) The method as recited in claim 13, further comprising:

receiving a reply packet for the mobile node identified in the request packet from the server, the reply packet acknowledging logging of the accounting information pertaining to the mobile node.

15. (Cancelled)

16. (Cancelled)

17. (Cancelled)

18. (Original) The method as recited in claim 13, wherein the counter indicates a number of registrations that have been accepted.

19. (Cancelled)

20. (Cancelled)

21. (Cancelled)

22. (Currently Amended) The method as recited in claim 13, wherein the AAA server is a TACACS+ or a RADIUS server.

23. (Previously Amended) The method as recited in claim 13, further comprising:

receiving a data packet from the mobile node, wherein composing the request packet is performed in response to receiving the data packet.

24. (Previously Amended) The method as recited in claim 23, further comprising:

forwarding the data packet to another network device.

25. (Original) The method of claim 13, wherein composing a request packet for the mobile node is triggered by an accounting event.

26. (Original) The method of claim 25, wherein the accounting event is a new registration or the termination of a registration.

27. (Currently Amended) In a AAA server that does not support Mobile IP, the AAA server configured to maintain accounting information for a plurality of mobile nodes supported by a plurality of network devices, the accounting information being received from the plurality of network devices, each of the plurality of network devices being a Home Agent or a Foreign Agent supporting Mobile IP protocol, a method of updating accounting information for a mobile node operating according to the Mobile IP protocol ~~Protocol~~ during a Mobile IP session, comprising:

receiving a request packet from a network device operating under the Mobile IP protocol and a AAA protocol supported by the AAA server~~Protocol~~, the request packet being sent in accordance with a the AAA-server protocol, the request packet identifying the mobile node and including at least one counter associated with accounting information pertaining to the mobile node, wherein the request packet indicates a request to update accounting information associated with the mobile node using the at least one counter, the network device being a Home Agent supporting the mobile node or a Foreign Agent to which the mobile node has roamed, the at least one counter indicating at least one of a number of packets that have been sent to the mobile node, a number of packets that have been sent from the mobile node, a total service time for the mobile node, a number of bytes that have been sent to the mobile node and a number of bytes that have been sent from the mobile node; and

logging the accounting information for the mobile node identified in the request packet using the at least one counter of the request packet.

28. (Previously Amended) The method as recited in claim 27, further comprising:

sending a reply packet for the mobile node identified in the request packet, the reply packet acknowledging logging of the accounting information pertaining to the mobile node.

29. (Previously Amended) The method as recited in claim 27, further comprising:

generating a bill for Mobile IP services from the accounting information.

30. (Cancelled)

31. (Cancelled)

32. (Original) The method as recited in claim 27, wherein the counter indicates a number of registrations that have been accepted.

33. (Cancelled)

34. (Cancelled)

35. (Cancelled)

36. (Original) The method as recited in claim 27, wherein the server is a TACACS+ or a RADIUS server.

37. (Currently Amended) A computer-readable medium having thereon computer readable instructions for updating accounting information for a mobile node in a network device that supports Mobile IP protocol during a Mobile IP session, the instructions comprising:

instructions for composing a request packet for the mobile node in response to a trigger event, the trigger event being one of a lapse of a predetermined period of time, initiation or termination of a registration of the mobile node, ~~or~~ and when a number of packets are received or sent by the mobile node, the request packet identifying the mobile node and including at least one counter associated with accounting information pertaining to the mobile node, wherein the request packet indicates a request to update accounting information associated with the mobile node using the at least one counter, wherein the request packet is composed in accordance with a AAA protocol; and

instructions for sending the request packet to a AAA server supporting the AAA protocol, wherein the AAA server is adapted for performing accounting for the identified



mobile node using the at least one counter in response to the request packet, the at least one counter indicating at least one of a number of packets that have been sent to the mobile node, a number of packets that have been sent from the mobile node, a total service time for the mobile node, a number of bytes that have been sent to the mobile node and a number of bytes that have been sent from the mobile node, the network device being a Home Agent supporting the mobile node or a Foreign Agent to which the mobile node has roamed, ~~wherein the server is not a Home Agent or a Foreign Agent~~, wherein the server maintains accounting information for a plurality of mobile nodes supported by a plurality of Home Agents, the accounting information being received from a plurality of network devices, each of the plurality of network devices being a Home Agent or a Foreign Agent supporting the Mobile IP protocol and the AAA protocol.

38. (Previously Amended) The computer-readable medium as recited in claim 37, further comprising:

instructions for receiving a reply packet for the mobile node identified in the request packet, the reply packet acknowledging logging of the accounting information for the mobile node.

39. (Currently Amended) A computer-readable medium having thereon computer readable instructions for updating accounting information for a mobile node in a AAA server that does not support Mobile IP during a session, the AAA server supporting a AAA protocol and configured to maintain accounting information for a plurality of mobile nodes, the accounting information being received from a plurality of network devices, each of the plurality of network devices being a Home Agent or a Foreign Agent supporting Mobile IP protocol and the AAA protocol, the instructions comprising:

• instructions for receiving a request packet from a network device operating under the Mobile IP protocol Protocol, the request packet being sent in accordance with the AAA server protocol supported by the AAA server, the request packet identifying the mobile node and including at least one counter associated with accounting information pertaining to the mobile node, wherein the request packet indicates a request to update accounting information associated with the mobile node using the at least one counter, the network device being a Home Agent supporting the mobile node or a Foreign Agent to which the mobile node has roamed, the at least one counter indicating at least one of a number of packets that have been sent to the mobile node, a number of packets that have been sent from the mobile node, a total service time for the mobile node, a number of bytes that have been sent to the mobile node and a number of bytes that have been sent from the mobile node; and

instructions for logging the accounting information for the mobile node using the at least one counter.

40. (Previously Amended) The computer-readable medium as recited in claim 39, further comprising:

instructions for sending a reply packet for the mobile node identified in the request packet, the reply packet acknowledging logging of the accounting information for the mobile node.

41. (Original) The network device as recited in claim 1, wherein the network device is adapted for sending the accounting request including the counter to the server when a packet is sent by the mobile node or received by the mobile node.

42. (Original) The network device as recited in claim 1, wherein the accounting request further includes a value associated with the counter.

43. (Original) The network device as recited in claim 2, wherein the packets received by the mobile node and sent by the mobile node are intercepted by the network device.

44. (Original) The server as recited in claim 3, wherein the accounting request further includes a value associated with the counter.

45. (Previously Amended) The server as recited in claim 3, wherein the total service time is a total of one or more registration lifetimes for the mobile node.

46. (Cancelled)

47. (Currently Amended) A network device which supports Mobile IP protocol and adapted for updating accounting information for a mobile node operating according to the Mobile IP protocol ~~Protocol in a network device~~ during a Mobile IP session, comprising:

means for composing a request packet for the mobile node in response to a trigger event, the trigger event being one of a lapse of a predetermined period of time, initiation or termination of a registration of the mobile node, ~~or~~ and when a number of packets are received or sent by the mobile node, the request packet identifying the mobile node and including at least one counter associated with accounting information pertaining to the mobile node, wherein the request packet indicates a request to update accounting information associated with the mobile node using the at least one counter, wherein the request packet is composed in accordance with a AAA protocol; and

means for sending the request packet to a AAA server supporting the AAA protocol, wherein the AAA server is adapted for performing accounting for the identified mobile node

using the at least one counter in response to the request packet, the at least one counter indicating at least one of a number of packets that have been sent to the mobile node, a number of packets that have been sent from the mobile node, a total service time for the mobile node, a number of bytes that have been sent to the mobile node and a number of bytes that have been sent from the mobile node, the network device being a Home Agent supporting the mobile node or a Foreign Agent to which the mobile node has roamed, ~~wherein the AAA server does not support Mobile IP~~, the AAA server in communication with a plurality of network devices supporting Mobile IP and configured to receive a request packet from the plurality of network devices, each of the plurality of network devices being a Home Agent or a Foreign Agent supporting the Mobile IP protocol and the AAA protocol, wherein the AAA server maintains accounting information for a plurality of mobile nodes.

48. (Previously Presented) The network device as recited in claim 1, wherein the server is a TACACS+ or a RADIUS server.

49. (Previously Presented) The network device as recited in claim 1, wherein the server is a AAA server and the accounting request is sent in accordance with a AAA server protocol.

50. (Previously Presented) The server as recited in claim 3, wherein the server is a AAA server and the accounting request is sent in accordance with a AAA server protocol.

51. (Previously Presented) The method as recited in claim 13, wherein the server is a AAA server and the request packet is sent in accordance with a AAA server protocol.

52. (Previously Presented) The method as recited in claim 51, wherein the AAA server is a TACACS+ or a RADIUS server.

53. (Previously Presented)  
server does not support Mobile IP.

The network device as recited in claim 1, wherein the

54. (Previously Presented)  
not support Mobile IP.

The server as recited in claim 3, wherein the server does

55. (Previously Presented)  
does not support Mobile IP.

The method as recited in claim 13, wherein the server

56. (Previously Presented)  
not a Home Agent or a Foreign Agent.

The method as recited in claim 27, wherein the server is